

WHAT IS CLAIMED IS:

1. A modified oilseed material comprising at least about 85 wt. % (dsb) protein; wherein the modified oilseed material has an MW_{50} of at least about 200 kDa; and at least about 40 wt. % of the protein in a 50 mg sample of the modified oilseed material is soluble in 1.0 mL water at 25°C.
2. The modified oilseed material of claim 1 wherein the modified oilseed material has an EOR of no more than about 0.75 mL.
3. The modified oilseed material of claim 1 wherein a 13.5% aqueous solution of the modified oilseed material forms a gel having a breaking strength of no more than about 25g.
4. The modified oilseed material of claim 1 wherein the modified oilseed material has a viscosity slope of at least about 20 cP/min.
5. The modified oilseed material of claim 1 wherein the modified oilseed material has a melting temperature of at least about 87°C.
6. The modified oilseed material of claim 1 wherein at least about 40% of the modified oilseed material has an apparent molecular weight of greater than 300 kDa.
7. The modified oilseed material of claim 1 wherein the modified oilseed material has a turbidity factor of no more than about 0.95.
8. The modified oilseed material of claim 1 wherein the modified oilseed material has a dry Gardner L value of at least about 85.
9. The modified oilseed material of claim 1 wherein the modified oilseed material has an NSI of at least about 80.
10. The modified oilseed material of claim 1 wherein the modified oilseed material includes at least about 1.4 wt. % cysteine as a percentage of total protein.

11. The modified oilseed material of claim 1 wherein the modified oilseed material has a latent heat of at least about 5 joules/g.

12. The modified oilseed material of claim 1 wherein the modified oilseed material has a ratio of sodium ions to a total amount of sodium, calcium and potassium ions of no more than about 0.5.

13. The modified oilseed material of claim 1 wherein the modified oilseed material has no more than about 7000 mg/kg (dsb) sodium ions.

14. The modified oilseed material of claim 1 wherein the modified oilseed material has a substantially bland taste.

15. The modified oilseed material of claim 1 wherein the modified oilseed material comprises modified soybean material.

16. The modified oilseed material of claim 1 wherein the modified oilseed material comprises at least about 90 wt. % (dsb) protein.

17. The modified oilseed material of claim 1 wherein the modified oilseed material has a bacteria load of no more than about 50,000 cfu/g.

18. A modified oilseed material comprising at least about 85 wt. % (dsb) protein; wherein at least about 40% of the modified oilseed material has an apparent molecular weight of greater than 300 kDa; and at least about 40 wt. % of the protein in a 50 mg sample of the modified oilseed material is soluble in 1.0 mL water at 25° C.

19. A modified oilseed material comprising at least 85 wt. % protein on a dry solids basis; wherein at least about 40% of the modified oilseed material has an apparent molecular weight of greater than 300 kDa; and the modified oilseed material has a viscosity slope of at least about 20.

20. A modified oilseed material comprising at least 85 wt. % (dsb) protein; wherein at least about 40% of the modified oilseed material has an apparent molecular

weight of greater than 300 kDa; and at least 40 wt. % of the protein in a 50 mg sample of the modified oilseed material is soluble in 1.0 mL water at 25°C.

21. A modified oilseed material comprising at least 90 wt. % (dsb) protein; wherein at least about 40% of the modified oilseed material has an apparent molecular weight of greater than 300 kDa; and a melting temperature of at least 87°C.

22. A modified oilseed material comprising at least 90 wt. % (dsb) protein; wherein at least about 40% of the modified oilseed material has an apparent molecular weight of greater than 300 kDa; and the modified oilseed material has an EOR of no more than about 0.75 mL.

23. A modified oilseed material comprising at least 90 wt. % (dsb) protein; wherein at least about 40% of the modified oilseed material has an apparent molecular weight of greater than 300 kDa; and the modified oilseed material has a turbidity factor of no more than about 0.95 at 500 nm.

24. A modified oilseed material produced by a process which includes extracting oilseed material with an aqueous alkaline solution to form a suspension of particulate matter in an oilseed extract; and passing the extract through a filtration system including a microporous membrane to produce a permeate and a protein-enriched retentate, wherein the microporous membrane has a filtering surface with a contact angle of no more than about 30 degrees.

25. The modified oilseed material of claim 24 produced by a process which includes extracting oilseed material at 20°C to 60°C with an aqueous solution having a pH of 7.5 to 10.0 to form a mixture of particulate matter in an alkaline extract solution; removing at least a portion of the particulate matter from the mixture to form a clarified extract; and passing the clarified extract at 55°C to 60°C through a filtration system including a microporous modified polyacrylonitrile membrane to produce a permeate and a protein-enriched retentate, wherein the microporous modified polyacrylonitrile membrane

has an MWCO of 25,000 to 500,000 and a filtering surface with a contact angle of no more than about 30 degrees.

26. The modified oilseed material of claim 25 comprising extracting oilseed material at 20°C to 60°C with the aqueous solution for no more than one hour.

27. The modified oilseed material of claim 25 wherein the process is a continuous, multistage process with an apparent contact time of no more than one hour.

28. The modified oilseed material of claim 25 wherein the process further includes diafiltering the protein-enriched retentate through the filtration system to produce a protein-containing diafiltration retentate.

29. The modified oilseed material of claim 28 wherein the process further includes heating the diafiltration retentate to at least 75°C for a sufficient time to form a pasteurized retentate.

30. A protein supplemented dairy-type food composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least 85 wt. % protein on a dry solids basis; at least about 40 wt. % of the modified oilseed material has an apparent molecular weight of at least 300 kDa; and at least 40 wt. % of the protein in a 50 mg sample of the modified oilseed material is soluble in 1.0 mL water at 25°C.

31. The dairy-type food composition of claim 30 wherein said dairy-type food composition is a pasteurized dairy-type food composition.

32. The dairy-type food composition of claim 30 wherein said dairy-type food composition is a protein supplemented yogurt composition.

33. A protein supplemented sauce composition comprising a modified oilseed material, wherein the modified oilseed material comprises at least about 85 wt. % protein on a dry solids basis; and the modified oilseed material has an MW₅₀ of at least about 200 kDa and at least about 40 wt. % of the protein in a 50 mg sample of the modified oilseed material is soluble in 1.0 mL water at 25°C.

34. The sauce composition of claim 33 wherein said sauce composition is a pizza sauce.

35. The sauce composition of claim 33 further comprising a suspending agent.